

SECTION 7.2 EMERGENCY PLANS (WAC 463-42-525)

This section provides a description of emergency plans to ensure public safety and environmental protection on and off the project site in the event of a natural disaster or other major incident. The description of the emergency plans includes the specific responsibilities assumed by the applicant. In the event of a natural disaster, the primary potential impact to the project would be a rupture of the pipeline. A secondary concern, and less likely potential, is a fire or explosion. The following section describes the actions that would be followed if a leak, rupture, fire or explosion were to occur as the result of a natural disaster, accident, or other event.

Olympic Pipe Line Company (OPL) has a spill contingency plan for its existing mainline pipeline system in the States of Washington and Oregon. A new and separate spill response plan similar to the existing plan will be prepared for the Cross Cascade Pipeline and submitted to EFSEC for review and approval prior to operation. As required by WAC 173-181-060 *Facility Contingency Plan and Response Contractor Standards*, the plan will be submitted at least 180 days prior to beginning operation of the pipeline. The plan will contain specific spill response protocols including procedures for accessing and responding to spills in cold weather where ice and snow conditions will likely be encountered (such as the section of the proposed pipeline route over Snoqualmie Pass).

The plan will also include criteria for the location and stockpiling of spill response materials to support emergency response to pipeline spills within predefined time response periods. Response times will vary with environmental conditions and spill location. However, the response time objective as a basis for development of the Oil Spill Contingency Plan will be 1 hour. As part of the logistical planning for marshaling spill response materials, consideration will be given to equipment and specialized response techniques to protect sensitive environmental resources such as those identified in Section 3.4 of the Application (WAC 463-42-332).

Under OPA 90, the responsible party assumes primary responsibility for the cleanup of a spill. The emergency response capabilities of local agencies will be ascertained during the development of the Oil Spill Contingency Plan and documented therein. In situations where equipment and training are necessary for the Cross Cascade Pipeline to rely on local agencies for emergency response, the planning for such equipment and training will be contained within the Oil Spill Contingency Plan.

The Table of Contents from the existing spill response plan is included in Appendix E. For information regarding spill control and prevention see Section 2.9 Spill Prevention and Control.

OPL has a *Safety Procedures Manual* which will apply to the construction phase of the project to respond to fuel spills, emergency response, fire and safety during construction. See Section 4.1, Subsections 4.1.2,

4.1.3, and 4.1.4 for a description of the potential risks to environmental health during construction, and the proposed measures to reduce or eliminate the risks.

7.2.1 REGULATORY OVERVIEW

To ensure that responsible parties have a rapid and credible response to spills, government agencies have promulgated a series of regulations directed at ensuring such emergency plans are in place. OPL will prepare a spill response plan which meets the applicable laws and regulations, described below.

The response plan will satisfy the requirements of the Oil Pollution Prevention Act of 1990 (OPA 90). In addition to the requirements of OPA 90, the spill plan will meet the requirements of the United States Department of Transportation (DOT), Research and Special Programs Administration (RSPA) within 49 CFR 194, Response Plans for Onshore Oil Pipelines; and of the Washington State Department of Ecology (WDOE) pursuant to RCW 80.50 and WAC 173-181, Facility Contingency Plan and Response Contractor Standards.

Under OPA 90, the responsible party assumes primary responsibility for the cleanup of a spill. The facility response plan is required to be consistent with the requirements of the National Contingency Plan and local Area Contingency Plans.

7.2.2 TRAINING

OPA 90 also requires specific response training for personnel involved in an oil spill response operation. In addition to OPA 90, there are several other federal and state training requirements that must be met. The federal Occupational Safety and Health Administration (OSHA) established minimum training requirements for personnel working in a hazardous waste site and facility or transportation operation encompassing emergencies (significant spills of refined and crude petroleum products are classified as emergencies). This rule, entitled the Hazardous Waste Operations and Emergency Response, identifies five levels of response requiring specific training and expertise. Employers must also comply with federal regulations contained within 49 CFR 172 and 176, outlining specific training requirements applicable to personnel involved with hazardous materials handling.

In accordance with 29 CFR 1910.120(e) and WAC 296-92-3040, personnel involved in post-emergency cleanup activities must be trained and thoroughly familiar with the procedures and protocols contained in the Site Safety and Health Plan.

OPL personnel are trained (based on need and function in the overall training plan) on aspects of spill notification and response, both through instruction on the job and at monthly training meetings. Training includes such topics as:

- Spill notification procedures
- Spill response organization and responsibilities
- Hazard awareness training
- Operation and maintenance of equipment to prevent and mitigate spills
- Environmental awareness training

7.2.3 SPILL RESPONSE ACTIONS

The guidelines outlined encompass an Incident Response Command System and direct the response to protect public health and the environment. OPL has established the following goals for a response to a spill in the initial hours of a spill. These goals include:

- Complete initial notification of authorities
- Secure the source of the spill
- Activate the response organization
- Activate spill response equipment
- Assess the situation
- Collect and manage information
- Identify spill trajectories and initial impact areas

The OPL Renton Control Center and the adjacent command center/conference room will serve as central control for managing operations and ensuring that proper internal and external notifications have been made in the event of a spill. To ensure the appropriate actions, close communications and coordination are critical between:

- Onsite personnel
- OPL Renton Control Center Operations Controllers
- OPL Operations Manager and Supervisor
- OPL Pipeline Manager (Incident Commander)

A decision tree outlining spill response actions and countermeasures comprising a spill response operation is shown on Figure 7.2-1.

FIGURE 7.2-1 - SPILL RESPONSE FLOWCHART

7.2.3.1 Spill Detection

Pipeline spills may be detected by onsite employees, pipeline patrols (primarily aerial), third parties, and/or the Renton Control Center through the online alarm systems and Supervisory Control and Data Acquisition (SCADA) system. Immediately upon recognition or notification, spills will be addressed with emergency shutdown and lockout procedures. More information on leak detection and conditions which can lead to shutdown or lockout is provided in Section 2.9 Spill Prevention and Control.

7.2.3.2 Immediate Notifications

All reports or notifications of spills are directed to the 24-hour Renton Control Center, which initiates notification procedures and other actions to shutdown the pipeline system or lockout the affected facilities. The initial actions are described below:

- Field personnel are immediately dispatched to the reported site for an initial assessment of the situation and, health and safety permitting, initiate spill containment.
- Personnel determine potential sensitive exposure sites in the vicinity and in the projected downstream and/or downgradient trajectory of the spill (sensitive exposure sites are pre-identified in the spill response plan).
- Local emergency response authorities (police and fire department) are brought to the scene if the spill has the potential to endanger public health and welfare (i.e., traffic hazard, explosion or fire).
- Notification is made to the OPL Incident Commander (OPL Manager) or designated alternate(s) if the OPL manager is not available.
- Upon receipt of the initial spill assessment, notification is made to the National Response Center and the federal, state, and local agencies as outlined in the predetermined spill notification checklist.
- Local and regional response contractors and mutual aid cooperatives are notified and activated as required.
- Depending on the magnitude of the spill, the Texaco Western Region Oil Spill Response Team and Worldwide Response Network may be requested to respond to the incident.

7.2.3.3 Initial Spill Response Actions

Upon completion of the initial notification sequence, spill response will focus on efforts to secure the source of the spill, and to contain and recover the spilled material. The first responders will assess the situation and determine the exact location of the spill, evaluate the magnitude and areal extent of the spill, and forecast spill trajectory. Based on this initial assessment, the Incident Commander may recommend further action to control the source, placement of barriers to prevent further spread of the spill, direct specific measures to protect sensitive resources, and/or the deployment of chemicals or other materials designed to restrict the spill and its potential impacts on human and environmental health.

It is the policy of OPL that the use of dispersants or in-situ burning are not considered viable spill control mechanisms unless federal and state agencies require the use of these methods.

When a facility or pipeline has a spill or poses a risk of imminent discharge, preventive actions to mitigate the size and areal extent of the spill are the first priority. However, the source of the spill will only be secured if the procedure can be performed safely and poses no threat to human health or safety. In any situation, spills within populated areas (incorporated or residential areas) take precedence over all other spill response operations or procedures.

Until confirmed otherwise, and the characteristics of the spilled material are fully determined, the spill environment will be presumed to be hazardous. If there is a concern about air quality, the site will be tested with air monitoring equipment.

Emergency Procedures

OPL is not an emergency response organization; however, OPL personnel are trained in emergency spill procedures and they will be involved in any emergency incidents which may occur. Prior to the arrival of local authorities responsible for traffic flow, search and rescue activities and/or fire suppression, limited action may be initiated by OPL personnel to minimize potential hazards to the environment and human health and safety. OPL personnel are directed to engage in emergency response activities (e.g., fire suppression) within the limitations of their equipment and training. OPL personnel will assist public health and safety authorities in whatever capacity requested and within their capability and training. These activities will primarily involve controlling vehicular traffic into the affected area, assisting in minimizing public exposure to the affected area, and assisting in preventing ignition of flammable material.

Site Isolation

Each emergency situation is unique, as the size of the area requiring isolation and the method of isolation will vary on a case-by-case basis. In general, fenced pipeline facilities (pump stations, block valves, and storage facilities) may be isolated by controlling traffic at the access road or at the gate to the facility. For emergency situations along the pipeline right-of-way, members of the OPL Spill Response Team will determine the size of the potentially affected area and make every effort to control access to the affected area(s) via roads, railroads, waterways, and trails. Temporary barricades restricting the flow of traffic into the affected area may be positioned prior to the arrival of local emergency response organizations, but final location of barricades and positioning of personnel to control access will be done in coordination with local emergency response teams.

Pipeline Facility Evacuation

Gas concentration sensors monitor the potential build-up of gas within a closed facility (e.g., pump station). These sensors are activated when there is a potential for fire and explosion, and the facility is locked out. OPL personnel will use extreme caution when this situation occurs. It is difficult to determine when the actual quantities of vapors present a hazard severe enough to warrant the evacuation of a work site or facility; however, OPL employees are trained to be aware of potential hazards and, in making a decision to evacuate an area, will exercise professional judgement based upon experience and training. It is OPL's policy that the protection of human life always take precedence over the protection of property or equipment.

In the event of an extremely volatile situation, the senior OPL operator has the authority to direct the evacuation of an affected facility. The senior OPL operator is responsible for all facility operations and serves as the On-Scene Commander until relieved by the Incident Commander.

If a decision to evacuate is warranted, the senior OPL operator notifies personnel within the affected facility via radio/telephone. However, if the situation requires the evacuation of the entire facility, the evacuation alarm will be activated, followed by verbal instructions to assemble at the designated assembly points. Each facility will have a preestablished evacuation plan.

The principal evacuation routes will be dictated by:

- Proximity to an escape route
- Hazard imposed by the spilled material
- Spill flow direction
- Prevailing wind direction and speed

Evacuated personnel will proceed to a designated assembly area for personnel accounting. OPL personnel

will, if possible, be provided portable radios and assigned to safe, strategic points around the periphery of the affected area to provide continual surveillance of the area and prevent entry by unauthorized persons. OPL personnel will be prepared to evacuate as conditions warrant.

Public Evacuation

Evacuation of the surrounding community is the responsibility of local emergency response agencies, and these response agencies will be incorporated into the Spill Notification Checklist. The OPL On-Scene Commander will coordinate with state and local emergency responders to activate the pre-established plan for community evacuation to ensure that a community wide evacuation proceeds in the most efficient and safest manner possible. Emergency response agencies will make the final determination on when and what stages of the community evacuation plan will be activated.

Prior to the arrival of law enforcement agencies, however, OPL personnel will attempt to visit all occupied dwellings within the affected area and inform the inhabitants of potential dangers. Evacuation instructions will emphasize that all open flames, including pilot lights and gas burners, should be extinguished. All evacuees will be warned verbally and in writing against smoking and operating motor vehicles or other spark-producing appliances in the affected area.

7.2.3.4 Source Control

A pipeline leak requires extensive damage control measures, including possible evacuation of the areas around the pipeline, closure of block valves, and release of high pressures at different elevations within the line. Prior to pipeline shutdown and as soon as possible, OPL will commence temporary pipeline repair to control the source of the discharge and suspend the release of product. Permanent repairs will be delayed until vapor dissipation has occurred and product recovery and site restoration activities have commenced. Temporary suppression may include temporary clamps, plugs, or bypasses.

7.2.3.5 Spill Volume Determination

Spilled product estimates are necessary in order to evaluate spill response equipment and personnel requirements, as well as requirements for the temporary storage and disposal of recovered petroleum product and contaminated debris.

The volume of product lost during pipeline transmission may be estimated based upon the duration of pumping, pumping rate, and static line loss. If this information is not readily available, a rough estimate of the spill volume may be generated via visual inspection of the spilled product. Based on the estimated spill volume, the incident is quantitatively classified to assist in the notification and mobilization of personnel and resources.

It is OPL policy to mobilize sufficient staff, equipment, and materials to ensure the optimum response to an incident in the shortest possible time. When there is incomplete or inadequate information, the worst case based on available information will be assumed, and resources will be mobilized accordingly.

7.2.3.6 Spill Containment

Spill containment will be initiated immediately upon notification. Appropriate containment actions are dependent upon the location of the spill and prevailing environmental and meteorological conditions. The effectiveness of containment depends upon weather, drainage conditions, and type and volume of the spill. In some circumstances, it may be more efficient and appropriate to focus on spill product recovery and resource protection rather than source control or immediate containment. In some circumstances, it may not be advisable to contain the discharged product adjacent to the facility or pipeline, due to a potential increase in fire, explosion, or human health hazard.

Refined petroleum products discharging into a surface watercourse spread quickly, but weather rapidly. Depending upon environmental factors, high winds and adverse water conditions may hinder effective deployment of surface equipment. Such conditions may cause the spilled material to be dispersed throughout the water column, evaporated into the atmosphere, or transported away from sensitive areas and resources.

Regardless of prevailing conditions, during any incident an immediate response will be undertaken to expedite the removal of spilled product from the environment.

7.2.3.7 Spill Response Strategies

The following section describes some of the basic strategies that will be employed by OPL during a spill incident. Prior to implementing a spill response strategy designed to contain and recover spilled product, the following factors will be considered:

- Sensitivity and priority
- Wave, current, and wind conditions
- Availability of required equipment, manpower, and logistics
- Time available to implement the technique

The first step in determining the appropriate response strategy is to determine the sensitivity of threatened areas or resources and prioritize actions in such a way that sensitive resources are protected. Priorities are determined based on:

- Presence of sensitive environmental, cultural, and/or human health resources
- Amount of spilled product and potential degree of impact

- Feasibility of implementing protection prior to impact
- Potential spill residence time

The containment technique will be selected on a site-specific basis and in consideration of factors including operational capabilities, terrain and weather/water conditions, availability of personnel and equipment, and the time required to implement the technique. Safety is a key consideration in the selection process. Deployment of spill response resources will only be attempted when conditions do not exceed the capabilities of equipment, vehicles, and/or vessels utilized. Specific techniques are discussed below.

Temporary Dikes, Dams, and Berms

Spilled product may be contained within ditches and gullies through the construction of dikes, dams, or berms. This technique can be employed to protect priority areas such as drains, sewers, ducts, and watercourses. These structures may be constructed of earthen materials, adsorbents, sandbags, plants, or any other material which could inhibit the passage of spilled product. Berms and dams may be constructed with standard earth moving equipment, i.e., front-end loaders, graders, bulldozers, and hand tools.

In some cases, small streams may need to be dammed to contain a spill. In an underflow (water bypass) dam, water is released at the bottom of the dam through a pipe (or series of pipes) laid during construction of the dam. Underflow dams are effective in small creeks.

Overflow dams allow water flow across the crest of the dam with the formation of a pool behind the berm, minimizing water velocity and facilitating product recovery. For an overflow dam, a separate barrier (floating or stationary) is placed across the pool created by the dam to arrest the surface layer of spilled product. Overflow dams are effective in medium-size creeks with higher flow rates.

Sorbent Barriers

Shallow onshore spills may be contained with absorbent materials. A sorbent boom may be used to contain and recover spilled product by placing the boom across the entrance to a surface watercourse or in the periphery of the spill.

Culvert and/or Storm Drain Blockage

Boards, sandbags, inflatable plugs, mats, plastic sheeting, and/or earthen materials may be used to block culverts and storm drains, facilitating subsequent containment and recovery with portable skimmers and/or vacuum truck units. If there is a limited storage area upstream of a culvert, it may be advantageous to allow the product to pass through the culvert and contain the release at the culvert outfall.

Containment Booming

Containment booms can be used to prevent downstream flow of spilled product and minimize shoreline impact. Containment booms are particularly effective in slow-moving or still water, and less so where wind, waves, and currents are present.

Deflection (Diversion) Booming

Deflection (or diversion) booming techniques can be used effectively along shorelines to divert spilled product away from sensitive areas and to a less sensitive area or to still water, where product may be easily contained and recovered. Booms can be used in watercourses with currents exceeding one knot; however, spilled product may be carried underneath the boom (entrained) if the boom is placed perpendicular to a current exceeding 0.7 knots.

Exclusionary (Protection) Booming

Exclusionary (or protection) booms can be used to seal off environmentally sensitive areas such as marshes, bird sanctuaries, and fish spawning grounds. This strategy should only be employed in waterways where current velocities are less than one knot.

Sorbent Booming

Sorbent booms are placed across a waterway entrance to prevent spilled product from re-entering a waterway from a contaminated shoreline; this type of boom can also be used as a secondary line of defense for initial booming operations.

7.2.3.8 Product Recovery

Selection of a cleanup method must be made by comparing the potential environmental impacts of leaving the product in place to the impact of the cleanup methods available. Generally, if the cleanup method reduces environmental impact in comparison to leaving the product to degrade naturally, the cleanup method is considered to be ecologically sound. Product recovery is generally accomplished on land with mechanized machinery such as bulldozers or tractor-mounted front loaders. In water courses, the two primary methods for product recovery are skimming and/or the use of absorbent material.

7.2.3.9 Cleanup and Disposal of Contaminated Materials

OPL waste disposal activities are governed by strict rules, designed to ensure the safe and secure handling of waste materials. This section outlines OPL policy on proper disposal of recovered product and associated debris. The OPL Incident Commander is responsible for coordinating the proper disposal and/or recycling of recovered product and debris.

Regulatory Requirements

The storage, handling, and disposal of waste materials is subject to federal, state, and local laws and regulations and requires permits and/or specific approvals. Pertinent regulations are described below:

- Federal regulations 33 CFR 153.305 require that recovered oil and contaminated debris be disposed of in accordance with state and local authorities.
- Federal regulations 40 CFR 260 impose additional requirements for the handling, treatment, and temporary storage of hazardous wastes (oil spill wastes and liquids with flash points less than 140 degrees Fahrenheit are considered hazardous).
- The Oil and Hazardous Substance Spills Act of 1990 as amended by the Spill Prevention Act of 1991 require policies and plans for the disposal of petroleum products recovered from a spill cleanup.
- Washington State RCW 70.105 and WAC 173-303 (Dangerous Waste Regulations) may classify oil spill wastes as extremely hazardous waste or dangerous waste upon spillage due to its toxicity, persistence, carcinogenicity, and/or flammability.

Responsibilities

The Federal and State On-Scene Coordinators are responsible for ensuring that disposal operations are accomplished in accordance with all applicable federal, state, and local regulations. The responsibility to arrange and carry out disposal processes rests with the responsible party.

Management and Disposal

The policy of the State of Washington during cleanup of spilled petroleum products is that to the maximum extent feasible, recovered product and contaminated debris shall be recycled and reused, thus reducing the amount of product debris incinerated or disposed of at solid or hazardous waste landfills. Returning the product to its intended use is the preferred conclusion of a spill cleanup and disposal operation. However, product which is recovered is often contaminated with soil, plants, plastics, or other debris and must be treated or reprocessed prior to reuse as a fuel oil or other petroleum product.

In order to quickly remove contaminated material and spilled product from the area and to ensure the safe disposal of the contaminated material, temporary disposal sites may be established. Temporary disposal should be convenient to the recovery operations and set up to prevent leakage, contact, and subsequent absorption of petroleum products by the soil. Temporary sites will be bermed and double-lined with plastic prior to receiving loose and bagged debris. A reinforced access for vehicles along the perimeter of the site will be provided. Product debris will be covered by secured visqueen or tarps and a stormwater runoff collection system adequate for the size and location of the site will be designed. As time and priorities permit, the contaminated debris will be moved from the temporary disposal site for final disposition.

Disposal Alternatives

Table 7.2-1 provides a summary of the final disposal options that will be considered by OPL for petroleum product-contaminated materials.

**TABLE 7.2-1
DISPOSAL ALTERNATIVES**

Disposal Method	Application
Landfill	Industrial waste landfills can be used for the disposal of bulky petroleum wastes (i.e., plant debris, shoreline vegetation, wood, sand, and generally contaminated trash). Depending upon the amount of type of debris, negotiable fees are usually charged by the operator.
Landfarms	Landfarming is a proven method for disposal of oily liquids. For many years, hydrocarbon processing plants have used this method for disposal of oils, petroleum products and sludges. Other than at existing on site or commercial landfarms, there may be significant permitting and regulatory requirements.
Reprocessing	When petroleum products are recovered in an almost uncontaminated state, reprocessing may be an excellent means for disposal. Sites which may accept recovered product include refineries, pipeline pump stations, terminals, and production facilities. Some locations with oil/water separators can also accept debris-free emulsions for reprocessing.
Reclaiming/Recycling	Petroleum products contaminated with small amounts of sand, gravel, or debris (usually less than 5 percent) can be sent to plants which reclaim petroleum products. These plants were previously set up to reclaim motor oil, but may accept contaminated petroleum products. They typically produce fuel-grade petroleum products.

7.2.4 FIRE AND/OR EXPLOSION

In the event of a fire at an OPL facility, local agency emergency services may be the first to respond. They would be expected only to render such response commensurate with the level of training and equipment in that particular district. OPL would request that a safety perimeter and traffic control be established, however, depending on the nature of the fire or explosion no additional response would be expected. OPL personnel will arrive as soon as possible following notification of such an emergency. OPL will coordinate with the responding emergency service and advise and assist during the emergency. Mutual aid agreements will provide equipment, materials, and training for local fire departments or emergency responders. Should any single event tax the suppression system beyond its capabilities or beyond the capabilities of OPL or other local resources, OPL will have immediately access to professional fire fighting firms located in California or Texas who would have the resources and expertise to manage a large tank/facility fire. These are the same backup resources that are available to refineries and fuel storage facilities, and will provide personnel, foam, and other equipment in large quantities within three hours.

In coordination with state and local authorities, OPL will prepare emergency preparedness and emergency response procedures for fire and/or explosion at the pipeline, pump stations, the Kittitas Terminal. In addition, plans developed with the assistance of local authorities will be more comprehensive and take into consideration whether the event is limited to the OPL facilities or is part of a widespread catastrophic event such as an earthquake or flood. After coordination and consultation with local and state authorities, OPL will submit a draft plan to EFSEC for review. A final plan will be submitted prior to commencing operation.

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